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ABSTRACT

This booklet is the Teacher's Manual for "Spell-Write" (Revised), a text to aid students in New Zealand in writing, spelling, and word study programs. "Spell-Write" (Revised) will be used predominantly in Years 4-7 classrooms. The overriding principle which has been retained in this revised edition is that of "flexibility." The aim was to produce a text that could function effectively in a variety of classroom spelling and word study programs, without being tied to any particular one. For the revision, words no longer commonly used in elementary school writing were removed from the Alphabetical Section, and new words in common use were added. An introduction discusses briefly the alphabetical spelling lists (3400 words), the background to the development of "Spell-Write," and its structure. The sections which follow are: Considering Spelling; Classroom Spelling Programmes; and Assessing Spelling and Evaluating Progress. Appended are a selective list of spelling tests (5 items) and a list of some useful books (8 items). (Contains 38 references.) (NKA)

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# TEACHERS MANUAL

# Spell-Write

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Cedric Croft

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TEACHERS MANUAL

# Spell-Write (REVISED)

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NEW ZEALAND COUNCIL FOR EDUCATIONAL RESEARCH
Wellington 2003

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PO Box 3237
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# 1 Introduction

## Background to the Development of *Spell-Write (Revised 1998)*

### *Spell-Write* (First Edition)

*Spell-Write* (Croft, 1983a) and the *Teachers Manual for Spell-Write* (Croft, 1983b) were developed to replace two earlier NZCER publications, the *Alphabetical Spelling Lists* (Arvidson, 1960a), and accompanying manual *Learning to Spell* (Arvidson, 1960b). A survey of spelling practices (Croft, 1976) had concluded that "although 55 percent of teachers were using the basic principles as outlined in *Learning to Spell,* many additional practices had been introduced". There were a number of other issues of research, curriculum and practice discussed by Croft (1983b), all of which indicated the pressing need to develop new spelling materials at that time. Croft (1983b) now stands as the record of development of the first edition of *Spell-Write* and the research that underpinned it.

## *Spell-Write* (Revised)

*Spell-Write (Revised 1998)* replaces the original edition published in 1983, with 15 impressions up to 1997. The research on which it is based identified approximately 3,400 common words from the writing of 1,200 students from Years 3–8, using a representative sample of primary and intermediate schools in 1996–97.

*Spell-Write (Revised)* is based on the important principle that spelling is primarily a skill of writing, which is best mastered within the context of learning to write. However, it needs to be acknowledged that writing *by itself* is unlikely to be sufficient for most children. There are important benefits for learning to spell from participating in a well-planned classroom programme of word study.

For the revision, words no longer commonly used in primary school writing were removed from the Alphabetical Section and new words in common use were added. The sections Essential Words for Spelling and Writing, and Groups of Words for

Spelling and Writing, were extended and reorganised. The number of entries in the Commonly Misspelt Words section was reduced. The flowchart Learning to Spell a Word has been retained with minor changes, but the section Place Names and Special Names, which was available for schools to complete, has been removed. A new section Hints on Spelling Other Words has been added.

*Spell-Write (Revised)* will be used predominantly in Years 4–7 classrooms. Some students in Years 3 and 8, too, will find it a useful resource. *My Words* is another research-based resource developed at NZCER. This is primarily for students in Years 1–3.

## Structure of *Spell-Write (Revised)*

The over-riding principle which has been retained in *Spell-Write (Revised)* is that of *flexibility.* The aim was to produce a text that could function effectively in a variety of classroom spelling and word study programmes, without being tied to any particular one.

*Spell-Write (Revised)* has been developed around the following seven principles:

(1) Spelling is a skill of writing. We learn to spell in order to communicate through writing. Spelling is not an end in itself.

(2) During the early stages of learning to write and spell, developing knowledge of the meanings and uses of words takes precedence over skills of recalling conventional spelling.

(3) Individual spelling programmes are needed if the diverse requirements of young writers are to be met within classrooms.

(4) Spelling and related word-use skills will not be picked up incidentally by all children. Most children will benefit from a sound programme of word study and spelling that links to their writing.

(5) There is a core writing vocabulary that must be mastered by all children if they are to become effective writers. If this vocabulary is not mastered as part of the process of learning to write, directed teaching is necessary.

(6) Skills related to using reference sources, proof-reading, and checking writing should be developed from the earliest stages of learning to write.

(7) The evaluation of growth in spelling must begin with written language, and utilise test-based information as appropriate.

*Spell-Write (Revised)* has five main sections: Alphabetical Lists, Essential Words for Spelling and Writing, Groups of Words for Spelling and Writing, Commonly Misspelt Words, Hints on Spelling Other Words.

### Alphabetical Lists (3,400 words), pp. 9–31

Children consult or "look up" this section when they wish to check their spelling. The major study that *Spell-Write (Revised)* was based on ensures that these lists contain the words children most often use when writing. The pages in this section retain guide words and brief meanings of common homophones and other words that children may confuse.

When children have learnt to use this section efficiently, they will have taken a major step towards developing independence in spelling, as they will have strategies to apply when checking their spelling. In addition, mastery of the techniques of using an alphabetically arranged spelling list will provide children with skills basic to efficient use of the dictionary and other common reference sources—an objective that will be foremost in the minds of all teachers.

### Essential Words for Spelling and Writing (290 words), pp. 32–34

This is a separate section listing the high-frequency words used most often in New Zealand primary children's school writing, and shown to be prominent in most forms of written and spoken English. These words have been arranged into seven lists on the basis of their frequency. The lists vary from 10 words to 70 words, and account for between 25 percent and 3 percent of most general writing. All words in the Essential lists are contained in the Alphabetical section also.

Although it is preferable to learn to use and spell these words within the context of writing, for some children the time may come when directed teaching of these words

will pay dividends. Teachers who wish their children to undertake special study of high-frequency words will find these lists invaluable for this purpose.

### Groups of Words for Spelling and Writing (580 words), pp. 35–41

This section provides sets of words that could form the nucleus of thematic word-study programmes, or provide lists for teachers who wish to organise spelling activities around a group of words that children often use in their writing. The words in these lists, together with the Essential lists, are taken from the most common 1,000 words in the writing of a representative sample of New Zealand primary children. This is a basic list of words that children have been shown to use regularly, and there is scope to extend the number of words within each group, in accordance with the characteristics of each class. All words in the Groups of Words lists are also contained in the Alphabetical section.

The thematic nature of the 52 groups of words enables a variety of classroom activities to be based on this section. For example, each complete group of words, or sets of words within each group, may be used as a basis for vocabulary extension, word-building exercises, or for aiding discussion of topics that pupils may write about. In addition, the words may serve as a handy reference for writing, as well as a means of introducing children to a simple thesaurus. The 52 groups of words are listed at p. 35 in *Spell-Write (Revised)*.

### Commonly Misspelt Words (55 words), p. 42

This section consists of words that are misspelt and/or misused in New Zealand children's writing. Each word has been included in this section because of its frequency of misspelling, not because of its frequency of use. Some words in the Essential Words for Spelling and Writing section are misspelt more often than words in the Commonly Misspelt Words section, but they have been placed in the former section because they are used more often. The 55 words in this section are also in the Alphabetical section.

As the Commonly Misspelt Words section is based on frequency of misspelling or misuse, it differs from the usual "spelling demons", which are usually chosen be-

cause of potential "hard spots" rather than because significant numbers of children misspell them in their writing. Teachers who wish to undertake special study of "difficult" words which are also written fairly regularly will find this a useful starting point.

### Hints on Spelling Other Words, pp. 43–44

Eight hints or principles are provided to offer guidance on the addition of suffixes to root words. For example:

(i) **d** may be added to some words **without changing** other letters.

| | | | | | | |
|---|---|---|---|---|---|---|
| *Examples* | dance | → | danced | raise | → | raised |
| | use | → | used | space | → | spaced |

Words that may have **d** added without changing other letters usually also end in *e*.

(ii) **ed** may be added to some words **without changing** other letters.

| | | | | | | |
|---|---|---|---|---|---|---|
| *Examples* | add | → | added | wait | → | waited |
| | seem | → | seemed | join | → | joined |

Words that may have **ed** added without changing other letters usually also end in *b, d, k, l, m, n, p, r, t, w.*

(iii) **ing** may be added to some words **doubling** the last letter.

| | | | | | | |
|---|---|---|---|---|---|---|
| *Examples* | sit | → | sitting | stop | → | stopping |
| | dig | → | digging | begin | → | beginning |

Final letters that are doubled before **ing** is added often include:

*bb, gg, ll, mm, nn, pp, rr, tt.*

(iv) **ing** may be added after **dropping** the final e.

| | | | | | | |
|---|---|---|---|---|---|---|
| *Examples* | remove | → | removing | hope | → | hoping |
| | smile | → | smiling | come | → | coming |

After the final *e* has been dropped, the letter before **ing** is added is often:

c, g, k, l, m, n, p, r, s, t, u, v, z.

These hints are not included with the intention that they will become rules for students to memorise, but more as principles that students will experiment with, and use as a basis for word building or word adaptation exercises.

# II Considering spelling

## The Issue of Spelling

Spelling, or more accurately, perceptions of poor spelling, becomes an issue from time to time for schools, parents, and the news media. There are issues, too, about the importance of correct spelling, the acceptability of standard American spelling in New Zealand, how spelling is best learnt and taught, whether spelling, as a surface feature of writing, warrants time which may be better given to the deeper features of writing, and just how performance in spelling relates to achievement in reading and writing.

But despite the legitimacy of those debates, there are other matters of theory and research in spelling that need to be addressed before we focus on classroom spelling programmes. It is to some underlying issues that we now turn.

## Spelling and Writing

The main justification for learning to spell is that accurate spelling is necessary for effective writing. If there is no need to communicate by writing, there is no need to learn to spell. Once this principle is accepted, a number of clear implications for classroom practice flow from it. But translating these implications into effective and manageable classroom practices is not a simple matter. To help in translating this principle into classroom management is an important goal for this manual.

Although spelling is a skill best acquired within the context of learning to write, there is still a place for learning selected words, provided that all words to be studied are necessary for each individual's writing; that the necessity to write these words exists now, or will exist with reasonable certainty in the immediate future; and that these words are rooted in students' everyday writing requirements or the programmes within their own classrooms.

## Spelling and Reading

The view that children learn to spell from reading is still fairly commonly held. It is thought that as children expand their sight vocabulary and begin to build their decoding skills, they also learn to spell. It has been noted in the literature from the early 1980s that this is not necessarily the case. For example, Read and Hodges (1982) remind us that reading and spelling are not simply reverse processes. When reading, interpretation of the context, cues from the meaning of the text, and syntactic information all aid word recognition. In spelling, the essence of the task is to reproduce a sequence of letters in precisely the correct order, with less assistance from context, meaning, or syntax. It is likely that links between reading and spelling are strongest when words are read in isolation without the aid of context.

Bradley (1983) has suggested that in terms of cognitive demands, reading is generally easier than spelling. While reading and spelling skills are based on common sets of knowledge and function in an integrated fashion, they may operate independently of one another in the early years of learning (Clarke-Klein, 1994). Many young learners approach reading and spelling quite differently, with visual and contextual information dominating for reading, and phonological information being paramount for spelling. But with increasing competence, these differences moderate, and more effective and integrated use is made of visual, phonological, and contextual information.

Peters (1985) has noted that although children do not learn to spell solely as a function of reading, most children begin to recognise the most frequently occurring words and letter strings as they read. But in addition to learning how to spell incidentally through reading, English spellings and the structure of these words must be explored and studied as part of the process of learning to spell (Barone, 1992; Fox, 1997; Westwood, 1999). It is unlikely that all learners will acquire the necessary knowledge base as a by-product of engaging in reading activities.

Ehri (1997) is one who has noted similarities and differences between English reading and spelling. On the one hand they are both based on the alphabetic system, and on knowledge of the structure of words and word meanings. On the other hand, the response performed to read words differs from the response needed to write words. There

is evidence that at the early stages, spelling helps reading, because it helps students' mastery of the alphabetic system, which in turn benefits the acquisition of word reading skills (Bradley and Bryant, 1985; Ball and Blachman, 1991). Clearly, too, more information must be memorised to spell words accurately than to read words correctly.

In accepting that there are differences in reading and spelling, despite their common sources of knowledge, how should reading and spelling instruction be organised? Accepting that spelling is not learnt solely by reading, and accepting that word-level and alphabetic skills are central to early spelling and early reading progress, suggests that teaching children to read without some focus on spelling may impede reading and spelling skills. Progress in reading and progress in spelling go hand-in-hand. Ehri (1997) has noted that:

> . . . the key to effective instruction is integration, that is, fostering close articulation among reading and writing knowledge sources and processes so that their acquisition is mutually facilitative and reciprocal. (p. 265)

The general principle of integrating early reading, writing, and spelling is adhered to by the majority of New Zealand primary teachers, as this approach has a long and successful history here. But the principle is worth re-emphasising, in case it is lost by over enthusiasm for a too strong and too structured approach to spelling in isolation from writing, for every child. As this manual notes, integrating spelling is best achieved by linking spelling closely to writing.

## Ways to Spell Words

At least five ways to spell words may be identified. These are by memory, by invention, by analogy, by locating the word in a reference source, or by some combination of these.[1] The process that predominates is normally influenced by whether the word is familiar or unfamiliar to the writer. Familiar words will most likely be recalled from memory and may also be verified by use of reference sources. Unfamiliar words will be spelt by invention, by analogy, or by use of a reference source.

[1] See Ehri, 1997, pp. 239–256 for a discussion of basic concepts and processes that are thought to underpin these and other spelling processes.

### Memory

When the written form is remembered, the word will be recalled when it is needed. The role of memory or automaticity in spelling may easily be underestimated, but it remains important. To reach a stage where the bulk of the most commonly used English words are remembered clearly and quickly is a clear goal for all spelling programmes. The advantages for fluent writing of having children recall from memory the spelling of the Essential lists and other common words cannot be overestimated. There is little debate about the importance of these words in writing, but there is debate about how children should learn them to the level of mastery required

Noting memory as a common way to spell does not endorse rote learning or list learning, as in most instances these are shown to be inefficient when the goal is to improve spelling during writing. One exception is for high frequency words, as mastering these has an immediate pay-back during writing (Croft, 1983b; Snowball, 1997).

### Invention

To be able to invent spelling, the writer must generate possible spellings (hopefully plausible) by analysing how the word to be spelt is pronounced, breaking the word into units, and representing these units in print. To do this effectively, the writer needs to know how to break the word into segments (perhaps syllables); match sounds to symbols (phoneme-grapheme correspondence); have some knowledge of common letter patterns, including prefixes and suffixes; and have some partial memory for the correct letters. Beginners are likely to rely mostly on phoneme-grapheme or grapheme-phoneme units. More advanced spellers may use their knowledge of spelling patterns or the structure of words as they try out spelling. When an unfamiliar word is needed, the writer may also use partial information from memory, if they remember some but not all of the letters.

The way in which children invent their spelling of unfamiliar words provides important clues about their progress, and provides the basis for the developmental spelling framework (pp. 21–23).

## Analogy

Using analogy is another way to read or spell unfamiliar words. In order to use this technique, writers must have sufficient information in memory about analogous words to be able to recognise the similarities, and apply this information to the unfamiliar word. However, given the variability of English spelling, analogy does not guarantee correct spelling, as similar sound patterns may be represented in conventional spelling by various letter combinations, for example: dread/bed/said; weight/mate; wine/sign. There is also the difficulty created by homophones, e.g., eight/ate; gate/gait; right/write; might/mite; and so on.

It is likely that beginners need a sufficient set of known spellings in memory before they can test letter similarities between known and unknown words. Hence spelling by analogy is likely to be a skill or process that is used by more proficient writers, rather than by beginners.

## Reference Sources

To use a common reference for locating or verifying spelling may, in the early stages, build on all or some of the skills that underpin memory (or partial memory), invention, and analogy. A writer may know part of a word, and "look up" the word to find out or verify the rest. A writer may be able to invent part of the word, and "look up" words using this partial information until they find the one they are looking for. A writer may go part way to a solution by analogy, and "look up" the word to verify or find the full and correct version.

No matter what level of morphemic or semantic information is brought to the task of locating a word in a reference source for the purposes of spelling, the skills of using reference sources are among the most empowering that students will acquire during their primary years. So important are they that developing these skills will seldom be left to chance. Every school will have planned programmes that aim to equip students with the skills needed to use all common reference sources.

NZCER's *Essential Skills Assessments: Information Skills* (Croft, Dunn, and Brown, 2000) provides a range of standardised tests that help schools to assess their students'

mastery of a range of skills associated with the efficient use of the most common reference sources.

Basic to every reference source is knowledge of the alphabet and the conventions of alphabetical order. *Spell-Write (Revised)*, with its 22 page Alphabetical Section, including guide words, provides a good beginning in using skills associated with alphabetical order from the early stages. The spelling resource for Juniors, *My Words* (Croft, 1988), will also help to establish good use of alphabetical information in beginning writers.

## How Predictable is English Spelling?

Before a strong case can be made for the benefits of teaching spelling, it needs to be shown that English is sufficiently predictable to allow a reasonable level of generalisation to occur. In other words, from knowing how to spell certain words, or classes of words, it should be possible to work out the spelling of other words, often by analogy. Evidence of the rule-governed nature of English spelling has come from Hanna, Hanna, Hodges, and Rudorf (1966). They conclude that most consonants have single spellings at least 80 percent of the time, and that while the spelling of vowels is not as consistent, their spelling can be predicted with reasonable certainty when factors such as stress, and position within words, are considered.

On the basis of additional work, Hanna et al. (1966) also concluded that 50 percent of the most common 17,000 words in English are regular, in that their spelling can be predicted on the basis of principles or rules that govern English spelling. It is important to note that the rules used in this part of the study were based on phonological information only, and did not include contextual information, which is often an important cue for determining English spelling.

Work such as this should not be interpreted as meaning that children should learn a host of spelling rules in order to improve their spelling. It is cited here to demonstrate that English spelling is in part rule-governed, and although many words must be learnt by memorisation at least initially, there is sufficient regularity in English to allow general principles to operate too.

## Generalisations in Spelling

One major reason for emphasising the importance of spelling as a constituent of writing is the principle of generalisation. Obviously, the issue of generalisation is vitally important for spelling, as it is essential that knowledge of spelling transfers from one task to another. As students become more familiar with a range of words, they learn the letter patterns that are duplicated across words. To take a simple example: if the word "keep" is studied and learnt, it would be with the aim of ensuring that the double "ee" and the associated sound would be generalised to the spelling, writing, and reading of words such as "sleep", "creep", and "peep". However, it is likely that many children will not automatically transfer learning from the formal spelling lesson to their writing. Provisions for children to learn possible generalisation, and apply this knowledge, must therefore be purposefully planned.

Research does not provide clear evidence that in all cases, generalisation in spelling is improved when spelling is taught as an integrated language skill, rather than as a series of words to be learnt and tested. However, the indications are that spelling generalisations are enhanced when spelling is regarded as a skill of writing, and classroom programmes are structured accordingly.

There is evidence to suggest that children, particularly up to about 9 years old, may learn to spell a word in one format, but then have difficulty with spelling when the format changes (Thomas, 1983). For example, "wheel" may be spelt correctly by itself, but when presented in the compound "wheelbarrow", it may be spelt incorrectly. Conversely, compound words spelt correctly in their entirety will not necessarily be correct when broken down to their constituent parts.

## The Role of Meaning

Traditionally, word length and regularity of phoneme-grapheme correspondence have been regarded as important influences on spelling difficulty. Other factors being equal, longer words are more difficult to spell than shorter words, and irregular words are more difficult to spell than regular words. But the role of meaning has come

under scrutiny. For instance, Mangieri and Baldwin (1979) studied the influence of word meaning on the ability to spell. Their results showed that even when the effects of word length, word frequency, and phoneme-grapheme regularity were controlled, there was still a significant relationship between children's knowledge of a word's meaning and their correct spelling of that word. This suggests that efforts made within classrooms to have children use new words should have beneficial effects on their spelling (Bean and Bauffler, 1987).

## Word Use in Children's Writing

Among the findings of the NZCER studies of children's writing basic to the development of *Spell-Write* and *Spell-Write (Revised)* were that 10 words and their repetitions account for 25 percent of the words written; 60 words account for 50 percent; 110 words account for 60 percent; and the most common 300 individual words and their repetitions accounted for almost 75 percent of words written. Although it may appear that this small number of words accounts for the majority of all words written, the important corollary is that although about 75 percent of most writing may be accounted for by 300 words, the total set of words from the NZCER studies was a little over 9,000. So the 25 percent of words used which were not accounted for by the most frequent 300 words are made up by close to 9,000 words! The main implication for teaching is that although we can identify a relatively small common core of words that will be used by most children for most writing, the remaining proportion of words that children may write comes from a much larger vocabulary.

Another point to note is that the law of diminishing returns operates within this common core of frequent words. The most common 10 words account for 25 percent of words written, but it takes the next most frequent 50 words to account for the next 25 percent, and to reach 75 percent takes an additional 240 words.

The relatively small common core of words that are used often, can be adequately catered for in the spelling and word study segments of a sound classroom language programme. However, the requirements of individuals writing about a potentially infinite set of topics are diverse. Catering for the development of this aspect of

written vocabulary, and ensuring that accuracy of word-use and spelling keep pace with it, is the major challenge of every classroom spelling programme.

## Spelling Errors in Children's Writing

Some findings related to the incidence of spelling errors in the NZCER studies of children's writing are relevant too. In the total of 200,000 words written, some 8,000 spelling errors occurred. Of the 9,000 individual words used, some 2,000 were misspelt, but of this total, 52 percent were wrongly spelt only once (Croft, 2002).

The proportion of frequent spelling errors is not nearly as dramatic as the proportion of frequently used words. While the 10 most frequently used words and their repetitions accounted for about 25 percent of all words written, the 10 most frequently misspelt words and their repetitions accounted for only about 10 percent of all mistakes. To account for 25 percent of all spelling errors, we have to include a total of 45 mistakes. To account for 55 percent of errors takes 300 words. Clearly, the relative frequencies and proportions of misspelt words and text words differ considerably.

It is more difficult to identify common errors from samples of children's writing, than it is to identify commonly used words. The message with regard to errors in children's writing is clear. The list of typical errors for groups of children is relatively small. On a class or group basis, there is strong support for ensuring that the common core of written words can be spelt conventionally, as this will ensure that these words, which constitute the bulk of writing, can be used correctly and spelt conventionally. However, the majority of spelling errors are individual, and reflect the diversity of word use found beyond the common core of written words. The only practicable way of catering for this type of error is to isolate the personal spelling errors of each individual, and ensure that meaning and use of the word is mastered, and the sequence of letters is learnt and remembered for future use. Such a system cannot function in isolation from each child's written language.

## Published Spelling Lists

No published list can constitute an adequate spelling programme for all pupils. A well-researched and carefully compiled list will be a major resource within a classroom, but it cannot contain all the words every pupil may need to use and learn. Although computer-based word lists and spell-checkers have revolutionised the concept of checking spelling, no published spelling list could ever be a complete source of all the words every child will need in his or her writing. Published texts such as *Spell-Write (Revised)* can cater for the most often used "common core" of written words, *but supplementary procedures and additional resources are needed if the remainder of each child's written vocabulary is to be developed effectively.*

## The Development of Spelling Skills

We are all aware from our experience as teachers that learning to read or write English to a proficient adult standard is a cumulative process for most learners. It is generally agreed, too, that as progress is made towards adult fluency in reading or writing, clear progressions are evident as skills of increasing difficulty are mastered.

In the case of spelling, however, unrealistic expectations may persist regarding the accuracy with which children, especially in the first three years of school life, should be able to spell. It is accepted that the spoken vocabulary of young school-age children will outstrip their reading vocabulary. But it is less generally appreciated that youngsters' ability to express ideas in writing will also outstrip their efforts to spell conventionally. It takes time and practice to achieve the same success in spelling words as in using words to express ideas. It takes time, meaningful practices, and experimentation for most children to progress to the stage of correct spelling.

Schools where a policy of having New Entrants and Juniors learn their five spelling words a night, with these words then tested in isolation from writing (or some variant of this practice), may unwittingly reinforce the unrealistic expectations some parents may have about spelling and how it is best learnt. As will be outlined next, spelling growth in most children follows a well-documented path. Indeed, there is evidence from Clarke (1988) and Ehri (1997) that requiring novice writers to learn

and use conventional spelling forms, when they have yet to fully comprehend the letter-structure of these spellings, limits their progress. This is more likely to be so for those children who display the least knowledge of letters, reading, and spelling.

As Croft (1983b) noted earlier:

> One important general conclusion from studies of writing and spelling of young children is that rote learning of spelling in isolation has little beneficial effect on accuracy of young children's spelling during writing. When spelling patterns are learnt as part of the process of writing to communicate, the initial learning may be slow, but the end result appears to be better spelling during writing.

This view is as applicable now as it was then.

It is now widely agreed, on the basis of research by Read (1975), Beers, Beers and Grant (1977), Henderson and Beers (1980), Bissex (1980), Gentry (1981), Gentry and Gillet (1993), and Zutell (1998), for example, that children's spelling may be classified as moving through five identifiable stages,[2] namely:

- precommunicative (also named pre-phonemic)
- semi-phonetic (also named early-phonemic)
- phonetic (also named phonemic)
- transitional
- correct (also named independent).

The **precommunicative stage** (typically 3+ years to 5+ years) is characterised by using random strings of letters (often upper case) and numbers to represent words. There is little or no evidence of letter-name knowledge, and a lack of letter-sound relationships. The writer has a real message in mind, but this is not communicated to the reader, hence the name precommunicative.

At the **semi-phonetic stage** (typically 4+ years to 6+ years), there is evidence of the beginnings of partial mapping of the phonetic content of many words, in that:

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[2] Cases have been made, also, for three and four stages. The five-stage framework presented here was chosen because of its applicability to primary classrooms.

(a) the main sounds in words are represented by letters

(b) the letters used show some form of partial mapping to sounds within a word

(c) a letter name strategy is often evident, e.g., "R" for are, "U" for you, "L" for elephant.

The appearance at this stage of what is often called "invented spelling" indicates the writer's growing awareness of relationships between the sound-structure of words, and their representation by letters.

During the **phonetic stage** (typically 5+ years to 7+ years), the young writer is better able to map the sounds of short regular words:

(a) the surface-sound features of words are represented

(b) spellings show the sequence of sounds in pronunciations

(c) a few common letter strings are reproduced accurately and easily, e.g., -ing, -ed, -ee-.

But letters are usually assigned strictly on the basis of sound, without regard to other conventions of English.

As students progress in this stage, sounds within more complex words are frequently mapped. Older students who are seen as having poor spelling skills may not have progressed through or beyond this stage.

In the **transitional stage** (6+ years to 11+ years), most basic conventions of English spelling are evident:

(a) vowels are placed in syllables

(b) vowels and consonants are used instead of a letter name strategy, e.g., "el" instead of "l" in elephant or "elefant"

(c) common English letter strings are evident, e.g., "yousual" for usual

(d) a more sophisticated understanding of spelling patterns and language structures is evident

(e) extended knowledge of the structure of words is shown, e.g., prefixes, suffixes, contractions, compound words, silent consonants and double consonants.

In general, students at this stage rely more on visual strategies to check if words "look right".

Westwood (1999) notes:

> At this stage, most students who are progressing normally and engaging in a great deal of writing have stored a considerable mental "bank" of correct word images. They can write almost all common words with a high degree of automaticity, and they have an increasing pool of known letter-sequences from which to draw when attempting to spell unfamiliar words. (p. 10)

At the **correct stage** (typically from 11+ years), almost complete mastery of even the most complex sound-symbol principles is evident. There will still be instances of individual words or atypical spelling patterns causing difficulty, but by and large students now have available a wide range of strategies for checking and self-correcting words.

During the earlier stages, the ability to recognise spelling errors far outstrips the ability to produce the correct version of the word. At the correct stage, recognition and production skills have become highly correlated (Ehri, 1997). This is shown in results from the *Proof-Reading Tests of Spelling* (Croft, Gilmore, Reid, Jackson 1981), where the proportions of identified errors that are respelt correctly increases markedly with age. Proof-reading strategies and skills for "looking up" words are used with increasing proficiency during the correct stage.

Students who are at the correct stage will continue to make some unusual errors, and fail to identify these when proof-reading their work. New Zealand research (Croft, 1983b) has shown that at Years 7 and 8, the year levels where the majority of students are at the correct stage, typically 2 percent to 3 percent of words (excluding proper nouns) are misspelt, and may remain undetected during proof-reading.

The developmental sequence as outlined here is summarised more broadly by Ehri (1997) as a move from "very rudimentary prephonic attempts representing perhaps just the first sound of a word . . . to reflecting various degrees of mastery of the alphabetic principle . . . to correct orthographic or morphemic spelling." Westwood

(1999) provides examples of writing which illustrate the five stages summarised here, and discusses the use of the stages for diagnostic purposes.

## The Spell-Checker

The widespread availability of spell-checkers may be seen to outmode some traditional skills of spelling and use of hardcopy reference sources. But for students of the age range that *Spell-Write (Revised)* is developed for, this is far from the case.

Inspection of the most common spelling errors in primary writing (Croft, 2002) shows that homophones (their/there; too/two; where/wear; through/threw; know/no) and easily confused pairings (off/of; bought/brought; thought/though) are prominent. Mistakes with these words more often result from the choice of the word for the particular context, rather than writing the letters in the wrong order. The spell-checker will help identify mistakes in the spelling. When the spelling is correct but the word is in the wrong context, the spell-checker is not much help. Traditional skills of knowing the spelling for particular contexts for the many easily-confused words in English remain important.

A spell-checker may be a useful aid for the minority of students who are having difficulty progressing beyond the phonetic stage of spelling development. If they are able to make a reasonable phonetic approximation of the word they wish to spell, the technology will help by "suggesting" a range of possible spellings. But the issue may then become whether these students have sufficient literacy skills to identify the correct form of the word they are seeking. Nevertheless, for these students, the spell-checker may provide a means of some progress towards correct spelling.

# III Classroom Spelling programmes

## How Can Spelling Programmes Be Organised?

Classroom spelling and word study programmes may sit at one of two possible extremes, or on a continuum between these extremes. At one end of the continuum are programmes stressing conventional spelling, with emphasis on recitation of lists, daily or weekly tests, and procedures aimed at teaching the conventional order of letters within words. These programmes which focus on words are classified by Allal (1997) as Specific Instruction in Spelling Programmes. At the other end of the continuum are programmes stressing communication skills and the broadening of each child's spoken and written vocabulary, to the apparent exclusion of what is usually regarded as spelling. Allal (1997) classifies these approaches as Instruction Integrating Spelling in Text Production. Both extremes are probably rare in New Zealand.

A classroom programme which incorporates a variety of word study activities, designed to enhance knowledge of the meanings and uses of words, may also incorporate a number of activities to assist with the spelling of those words. It is probable, too, that a programme aimed primarily at s-p-e-l-l-i-n-g may incorporate activities that will promote the acquisition of broader vocabulary skills. The important distinction is that activities which support spelling should remain subsidiary to activities which support written communications. The aim of a classroom spelling and word study programme is to ensure *that words to be used are correctly spelt, and not that correctly spelt words are used. Spell-Write (Revised)* is likely to be used more frequently by students in classrooms that place spelling and word study activities in the former category.

There are major principles to be kept firmly in mind when planning a classroom spelling and word study programme incorporating *Spell-Write (Revised)*. These are:

- Spelling is a writing skill.
- Spelling is best learnt in association with writing, and not as a result of studying isolated lists of words.

- Not all children will "pick up" spelling as a result of writing or reading. For most children, a planned and purposeful study of the structure and meaning of words is an essential part of a classroom spelling programme.
- Words that are incorporated in a word study programme must be words that children are likely to write in the near future, or must emerge from aspects of a classroom programme, for example, written language, social studies, science, mathematics.
- There is a relatively small core of high-frequency or "heavy-duty" words that must be used properly and spelt conventionally, if skills of written communication are to develop.
- Beyond this small common core of words, there is a rich and diverse written language unique to each individual.
- There is markedly less uniformity and agreement to be found in the spelling errors of a group than in the frequency of words they write.

These major principles can all be fulfilled by three distinct but related facets of the word study and spelling segment of the classroom language programme. These are:

(1) Personal spelling lists

(2) Word study, vocabulary extension, and related activities

(3) Studying and mastering the core vocabulary of writing.

## Personal Spelling Lists

Putting aside the classroom management aspects for the moment, the Personal Spelling List (PSL) is the best way of catering for the wide diversity of writing and the individual nature of spelling mistakes found in most classrooms. If we agree that the words each individual should learn to use correctly and spell conventionally are those that have been shown to be troublesome, we must conclude that success can be achieved only if at least part of the spelling and word study programme functions on an *individual basis*.

If spelling errors from each child's writing are recorded, compiled, learnt,[1] and tested on an individual basis, the outcome should be that spelling misconceptions are gradually refined, and time is not wasted learning and studying words that are either known, or not used in writing. The fundamental point is that words to be learnt originate in each child's writing, or are sufficiently general in their use to be used again and again.

The question of which mistakes should be included in the PSL is important. A previous approach (Arvidson, 1960b) was to assess each child's "spelling level", and have all words included in a PSL, if they occurred in children's writing, and were equal to, or lower than, the assessed spelling level. As a procedure for giving some mistakes a higher priority than others, this had merit. However, it assumed that the frequency of use for each word was constant for all children.

Freyberg (1973) found that the bottom 25 percent of pupils achieved less well under the approach to spelling described by Arvidson (1960b). He suggested that the less able speller may benefit from a more structured spelling and word-study programme. He also pointed out that some high-frequency words, such as "their", "where", "through", "heard", are difficult to spell and use, whereas some low-frequency words, such as "rig", "tar", "net", are much less difficult. The difficult high-frequency words may impede progress through the levels to these easier words, with the result that some less able spellers are denied the chance of mastering these easier words until later.

This is unlikely, given the individual nature of each child's written vocabulary. The best basis for including a word in a PSL is probably that the child has demonstrated a lack of familiarity with the word during writing, and that some time in the near future, the word is likely to be used in writing.

With this move away from using the frequency of words as the basis for inclusion in a Personal Spelling List, teachers will have to exercise their judgment in determining words to be entered in PSLs. There seems little point in the early primary years in including words that are likely to be seldom used, or have complex spelling.

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[1] The display from *Spell-Write (Revised)*, p. 8, Learning to Spell a Word will help. It is included at pp. 34.

In terms of judging the suitability of words to be included, the Alphabetical Section of *Spell-Write (Revised)* will provide a helpful reference. Any word in this list that is misspelt or looked up should be included in the learning list. Teachers should use their own judgment for words outside this list of 3,400 commonly used words. At all times, the criterion should be *the relevance of the particular word to the individual child's written language requirements*.

It would be wrong to assume that once a word has been recorded in a PSL, and learnt to the degree where its spelling can be recalled, it can be regarded as requiring no further revision. Unless the particular word is in regular use, it will be forgotten. There is a need to have each child's personal list organised in a way that allows periodic testing of meaning and spelling to be undertaken.

The classroom management for ensuring that as many as 30 children compile and keep a PSL up to date is complex, but the difficulty can be reduced by putting into operation a set of classroom procedures involving each child in what is, essentially, their own personal learning, for which they must assume ongoing responsibility. This may be a fruitful area in which to use self assessment.

If the PSL is organised on a weekly basis, children can record all words that the teacher has marked as incorrectly spelt in their written work, and also all words that they have "looked up" from *Spell-Write*, or some other suitable source. Teachers who wish to control the actual words for the PSL may mark each word to be entered in some clearly identifiable manner. An arbitrary maximum number of words for the PSL each week cannot be given, as this decision will depend very much on each child's age and accomplishments, and the scope and extent of classroom writing programmes. As a general guide, however, it seems as though the optimum number of words for each child's PSL would be somewhere between 5 and 10 per week. Given that spelling skills develop gradually, it is preferable to adopt a conservative approach to the number of words to be included, and subsequently learnt, revised, and tested.

If words to be entered in the PSL have been written incorrectly, or had their spelling checked in some source, how are children who have no need to check spelling, or do

not make errors, to be regarded? Provided these children show evidence of steady development of writing skills, there is no cause for concern if entries in their PSL are few. However, it is a different matter if the lack of entries in the PSL results from minimal output, poor quality of writing, the use of restricted and easy-to-spell words, or lack of development in style or self-expression. There is clearly an urgent need to reappraise the suitability of the language programme for this child. If few entries are accompanied by little growth, the matter can be best rectified by modifying the language programme, rather than by abandoning the personal list.

### Word Study and Vocabulary Extension

The Personal Spelling List (PSL) provides the major means of catering for the spelling errors and spelling uncertainties of individual children. Since it comes into play only after an error or uncertainty has been identified, the PSL is primarily remedial. Nevertheless, a programme of word study and vocabulary extension can be both educative and preventive, and has a role to play in spelling and vocabulary development. The thematically arranged Groups of Words in the Spelling and Writing Section on pages 35–41 of *Spell-Write (Revised)* is one source of words for study.

A word study and vocabulary extension programme may be developed around the following principles:

- It is a systematic attempt to develop skills of word use.
- Primarily, the programme is a study of the uses, meanings, and structure of words.
- The programme incorporates activities that demonstrate the spelling patterns of English, and illlustrate the exceptions to these patterns.
- There is, or will be, a need to write the words chosen for study.
- At the broad level, the programme is linked to the science, social studies, language, craft activities, or mathematics currently being taught.
- A variety of ways of learning to spell a word is used.

As with all "word list" type spelling programmes, there is a danger that an attempt to produce a common list will result in a selection of words too difficult for some

children, and too easy for others. It is possible to minimise these effects by a careful choice of words. However, if this fails, an alternative may be to group children for this work.

How might a programme of word study and vocabulary extension be organised? One approach is to select a group of words with relevance to some aspect of the total class programme for that week, for example, social studies, and embark on a study of the characteristics, structure, variations and uses of those particular words. Alternatively, choose an appropriate set of words from the Groups of Words for Spelling and Writing, expand this list to include related words suited to the class, and use this new list for word study activities. The focus of the programme should be on the uses and meanings of each word, and the aim should be to equip each child with the skills needed to use these words in subsequent writing.

After selecting an appropriate group of words, a series of word study exercises may be undertaken. The range of exercises may include:

- using words in sentences
- finding the dictionary meaning of selected words
- supplying antonyms, synonyms, and homonyms
- classifying words into sub-groups
- identifying words in the list, after some clue to their meaning or use has been supplied
- identifying words with multiple meanings
- segmenting the word
- undertaking word-building exercises, for example, adding prefixes and suffixes to the root word
- identifying the root word by removing prefixes and suffixes
- making new words by adding or removing letters
- changing tenses
- writing in plural form

- completing skeleton form of words, such as s_e_l_ng,

or


- marking silent letters
- practising the spelling of words
- arranging the list in alphabetical order
- matching words with similar shapes
- marking vowels as long or short
- writing words in syllables.

The aim of these and related activities is to familiarise children with the words chosen for study, and help them understand the correct and common patterns of English spelling.

A study of meanings will enhance the use of words, and hence aid the retention of spelling. A study of the orthographic pattern of selected words will help children appreciate the rich and varied qualities of the English language, and aid the learning of spelling generalisations.

In planning a class programme of word study and vocabulary development, how many words should be included, and for how long should the study of one set of words continue? There are no set answers to these questions. Possibly a range of somewhere between 5 and 15 words would be appropriate for most classes, with Years 4 and 5 being towards the bottom of the range, and Years 7 and 8 towards the top. As for the time to spend on a set of words, one week is probably adequate. This allows for word study activities to be undertaken in a variety of ways, and on a regular daily basis. It also allows knowledge of meaning and spelling to be tested, along with the aspects of the week's word study activities that are regarded as important outcomes. Any words that are shown by this testing procedure to be poorly known or understood can be transferred to the PSL for further study.

## Studying and Mastering The Core Vocabulary of Written English

The core vocabulary of "heavy-duty" written words is relatively small when compared with the typical writing vocabulary of between 10,000 and 30,000 words for most children and adults. The Essential Words for Spelling and Writing Section of 290 words, on pages 32–34 of *Spell-Write (Revised)*, on average accounts for about three-quarters of the words used by most children in their general day-to-day writing. Incidentally, other studies e.g., Horn (1960), also indicate that the proportions of high-frequency words found in adult writing and literature are generally similar. Whether the core vocabulary is defined as the 50 most often used words or the 500 most often used words is relatively unimportant. What is important is that for most writers, within the written vocabulary of tens of thousands of words, a set of a few hundred accounts for a large proportion of their writing. Obviously, to master these high frequency words is of the utmost importance if effective and efficient written communication is to be achieved.

Before we discuss the teaching of the high frequency words, there are two important points to clarify. The first is that the Essential Words for Spelling and Writing and the Groups of Words for Spelling and Writing are *writing* vocabularies. The justification for learning how to use and spell these words is that they are essential for each child's writing. In other words, these lists are the nucleus of a writing vocabulary, and not of a spelling vocabulary.

The second point is that although the Essential Words and similar lists account for around 75 percent of most writing, this estimate is a group figure. It is an average which is subject to wide individual variation. In any given case, and for any given topics, the proportion of words accounted for by the Essential Words will vary. This means that although the importance and usefulness of the Essential Words is indisputable, it is not wise to regard every word as being of equal importance for the writing of each individual, in every situation. As noted on pp. 32–34 of *Spell-Write (Revised)*, List 1 contains just 10 words which account for about 25 percent of most texts, but List 6 contains 70 words which account for just 5 percent of most texts.

These two points suggest that it is important for children, especially in the early

stages of writing, to master the Essential Lists as an aspect of learning to write. Teachers should not hesitate to correct misspellings of any of the Essential Words, but they should wait for uncertainties in the use of the words to show up before they are studied intensively. It might seem more logical to begin a study of these "heavy-duty" words early in each child's writing career, but the reality is that words mastered in a list-learning context may not necessarily be correctly transferred to writing. Unless words mastered in isolation are subsequently used in writing, they will be forgotten. When these words are not being mastered as part of the process of writing, systematic teaching of their use and spelling must be introduced. If learning to spell these words can be coupled with learning to use them in meaningful and relevant contexts, recall of spelling will be improved.

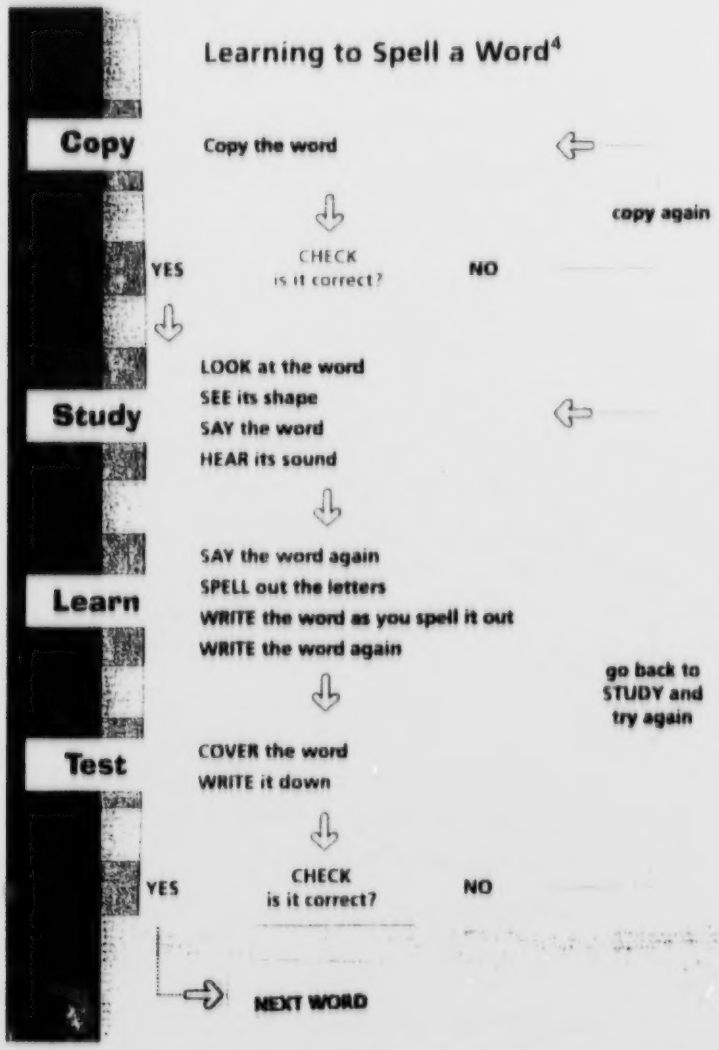
At what point should directed teaching of the Essential Words in isolation from the process of writing be considered? For most children, the latter part of the fourth year of school is probably the earliest time to begin, and a graduated approach is recommended. From that point on, there is more justification for ensuring that use and spelling of the high-frequency words are mastered. However, this is not to advocate a wholesale teaching of the Essential Words as an isolated word study task from Year 5 on. The emphasis should remain on the acquisition of the Essential Words as a part of writing; but children who are not mastering them in their writing may also need directed teaching.

The aim should be that most children should master the spelling and use of the Essential Words before completing Year 6. Preferably, this will happen within the context of writing. But if that is unachievable, a secondary aim could be that the spelling of these words is known. If these aims are unrealistic for some children, they should be moderated.

Should the Groups of Words for Spelling and Writing be regarded in the same light as the Essential Words for Spelling and Writing? The former has been presented as a nucleus of words to be included in classroom word study and vocabulary extension programmes. As they have been shown to be used fairly regularly by children, they are important; but as a group their collective use does not warrant the prominence

given to the Essential Words. The Essential Words may be regarded as a basic core vocabulary, and the Groups of Words as an extension of this basic core.

All children should learn to use and spell the words in the Groups of Words for Spelling and Writing, and their common derivatives, within the writing and word study programmes. However, some of the groups of words, for example, "days", "months", "numbers", "family names", may warrant special teaching in the middle primary years. Each teacher is the best person to make this decision, and the structure of *Spell-Write (Revised)* is sufficiently flexible to enable a variety of approaches to be taken.




4 Lake (1989) found that after children were trained in this procedure, they learnt to spell at more than twice the rate they did prior to training in the procedure.



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# IV Assessing spelling and evaluating progress

## Objectives and Assessment

The objectives of a classroom spelling programme will determine how assessments are to be carried out. If an objective is fairly specific, such as, "to reduce the number of Essential Words misspelt during writing", a simple count of errors in these words, compared with the tally of six months ago, will help to decide whether the objective has been reached. The achievement of short-term goals within a classroom programme must be based on clear and measurable objectives.

If the objective is broader, such as, "to ensure that adequate discrimination is evident between all homonyms in the Essential Words, and that this knowledge is transferred to writing", then specific testing of the homonyms and analysis of samples of the students' writing are needed. Some judgment is required to help decide whether discriminations are "adequate" or not. Moreover, "adequate" might vary for different pupils; what is "adequate" for one may be "inadequate" for another.

If the objective is more akin to a long-term goal, such as, "to ensure that each student develops their spelling to a level in keeping with their ability to write clearly", a variety of writing, as well as a selection of test scores, would be needed. This information would then be modified in the light of knowledge about the child's ability to write English.

## Evaluation and Judgment

Making decisions about what is "adequate" or "inadequate" moves us into matters of judgment or evaluation. The essence of evaluation is that available objective and subjective information is used to help judge whether the goals of the instruction have been attained. The evaluative process itself is subjective, and this is both a strength and a weakness. Its strength is that it may include features that are not measurable,

but are nevertheless crucial in determining "quality". Its weakness is that the "importance" of those subjective factors may exist only in the eye of the beholder, may be applied inconsistently, or may be judged against unclear or varying criteria. However, if assessment excludes the "cannot be validly quantified" type of variable, it is limited to measurement, and measurement alone is not an adequate basis for determining value. However, evaluation is not restricted to judging whether the objective has been attained, as the adequacy or appropriateness of the objective itself can also come under scrutiny.

## Assessing and Evaluating Progress

There are five aspects of spelling to be assessed in the classroom:

- progress within the context of writing
- progress along a developmental continuum
- achievement in relation to peers
- mastery of individual words identified for study
- particular weaknesses that are evident for individual students.

### Progress in Spelling Within the Context of Writing

Few teachers would disagree that the ultimate measure of each individual's spelling is found in their writing. There are undoubted advantages of assessing spelling in the context of writing, but these are accompanied by a host of problems which limit this process. For example, there are problems relating to the words being written, conditions under which the writing was produced, influence of the topics on choice of vocabulary, and hence the difficulty of the spelling. There are also unknown influences of the relative difficulty of words, in relation to the writer's knowledge and experience. The writer's personality is a factor too. How may the writing of a "risk taker", who may have an extensive and colourful vocabulary with a high incidence of spelling errors, be compared with that of a more conforming student, who may use simple, safe, easy-to-spell words? Although assessing spelling within the

context of individuals' writing is desirable, achieving reasonable standards of validity and reliability poses difficulties.

The approach that follows does not eliminate the assessment problems outlined above, but it begins to bridge the gap between totally subjective judgment and more objective assessment. This approach is not designed to be used on a regular basis, but should be restricted to once or twice a year, when a measure of progress in spelling within the context of writing is needed.

To apply the rating scale below, three pieces of prior information are required:

1. *The percentage of words misspelt in the total piece of writing, excluding all proper nouns*
2. *The number of mistakes in the Essential Words*

   These mistakes may be further expressed as:

   (i) a percentage of all words written

   (ii) a percentage of all mistakes.
3. *The number and percentage of words in the Alphabetical Section of Spell-Write (Revised) that are spelt incorrectly in the writing*

Then, on the basis of the information in 1–3, the following rating scale may be applied.

### Scale for Rating the Quality of Written Spelling

**1** = A "limited" vocabulary; more than 3 percent of misspellings are Essential Words; more than 5 percent total errors.

**2 (a)** = A "limited" vocabulary; up to 3 percent of misspellings are Essential Words; up to 5 percent total errors.

**(b)** = An "adequate" vocabulary; more than 3 percent of misspellings are Essential Words, more than 5 percent total errors.

**3 (a)** = An "adequate" vocabulary; up to 3 percent of misspellings are Essential Words, up to 5 percent total errors.



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3 (b) = A "well-developed" vocabulary; more than 3 percent of misspellings are Essential Words, more than 5 percent total errors.

4 (a) = A "well-developed" vocabulary; up to 3 percent of misspellings are Essential Words, up to 5 percent total errors.

(b) = A "superior" vocabulary; more than 3 percent of misspellings are Essential Words, more than 5 percent total errors.

5 = A "superior" vocabulary; up to 3 percent of misspellings are Essential Words, up to 5 percent total errors.

The central feature of this scale is the evaluation of the quality of the written vocabulary. The data related to spelling accuracy have been determined objectively, but there is no information of a manageable nature that can be used to make objective judgments of the *quality* of children's vocabularies. By using their professional judgment, teachers will be able to classify the vocabulary in a writing sample as either "superior", "well-developed", "adequate", or "limited" in relation to children of a similar age-group. The assessment of spelling, in relation to the quality of vocabulary, may then proceed more objectively.

This rating scale illustrates one assessment that may be made of spelling in the context of writing.

### Progress Along A Developmental Continuum

The development of spelling has been discussed above using a five-stage model. The main hallmarks of written spelling through these five stages may be used to assess the features of spelling in a particular piece of writing, with a view to classifying the writing along the developmental continuum, as represented by the five stages.

If assessments of this type are undertaken throughout a child's primary school career, and filed in a portfolio or writing folder, they will provide an invaluable picture of the progress each child is making in written spelling. This picture will be much clearer if the developmental stage that best fits a piece of writing is noted and dated



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on the actual written script. Annotations that illustrate just why the writing was placed at a particular developmental stage would strengthen the assessment too, as there will be instances when an individual's general progress may seem slow, but there are shifts in the quality of spelling to indicate that progress is continuing.

There will be many instances of writing that do not fit entirely within one of the five spelling stages, but span adjacent stages. This is to be expected, as the stages themselves are broad and do overlap. Additionally, as children move from just "being there" to "full mastery", a particular skill may be evident in some words, but not in others. Hence, parts of the writing may represent one stage and other parts may represent another.

Another important point is that the developmental stages as described represent writing, but not children. It is more valid to note that a particular piece of writing fits within a particular stage, than to note that the child is "at" a particular stage. This latter interpretation confers more certainty in developmental terms on the particular stages than they actually have. Nevertheless, over the long term they provide a useful framework for measuring progress and assessing growth in spelling.

## Spelling Achievement in Relation to Peers

The possible benefits of standardised tests of spelling should not be exaggerated, nor should they be ignored, as standardised tests are objective sources of useful information.[5] Standardised tests are a valuable adjunct to assessing the quality of spelling in writing, as they have features that cannot be duplicated by other procedures. Providing the content is equally appropriate to all students, inferences may be made about the extent to which the words sampled by the test have been mastered. Furthermore, as the limits of the test's reliability are known, the consistency of each score can be estimated, and, if the test has norms applicable to the student, scores can be interpreted in the light of the performance of the norms group.

[5] For a discussion of the possible classroom uses of standardised spelling tests, see Teachers Manual for *Proof Reading Tests of Spelling*, Croft, Gilmore, Reid and Jackson (1981).

There are four major features of standardised spelling tests:

- direct measurement
- inferences about the subject-area being sampled
- reliability
- comparative measures.

All four complement measurements made of spelling in the context of writing. However, a standardised test of spelling, whether it is of the dictated, multiple-choice or proof-reading type, conveys less information about the quality of a child's spelling in his writing. Similarly, the most meticulous marking of a sample of writing will produce little information regarding the broad levels of performance on a sample of selected words in relation to class, school, or age peers.

While it is useful to know how performance on a standardised test of broad spelling skills relates to a wider reference group, the most complete picture of spelling achievement comes from information based on each child's writing, providing this information can be interpreted in the light of the child's accomplishments in relation to appropriate reference groups.

### *What Type of Test is Appropriate?*

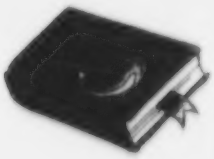
If there is a need to choose a standardised test of spelling that has the closest relationship to spelling in the context of writing, the choice is clear. A test that incorporates *recall* or *production* skills, that is, a proof-reading test or a dictated test, is superior to a test emphasising *recognition* skills alone, such as a multiple-choice test (Croft, 1982). Furthermore, a standardised test incorporating provision for diagnostic analysis, and having norms for New Zealand children, offers additional advantages. The *Proof-Reading Tests of Spelling* have both of these features. A selection of spelling tests is included in the Appendices.

The Assessment Resource Banks (ARBs) and material released from the National Education Monitoring Project (NEMP) are new sources of spelling tasks that incorporate some of the features of standardised tests. An advantage of the ARBs is that these are available on-line to every school (www.nzcer.org.nz). The ARB search

engine enables teachers to locate and print New Zealand-developed material which is linked to specific curriculum objectives. The majority of the spelling tasks within the ARBs are of the proof-reading type. Some examples follow.

## WL3111

Jenny wrote a letter to her grandfather to thank him for her birthday present, but she has made some spelling mistakes.



Read the letter right through and draw a circle around all the spelling mistakes. Write the correct spelling of each mistake in the space at the start of each line. If you cannot find a mistake, put a tick (4) in the space. The first four lines have been done for you.

| | |
|---|---|
| Street | 121 Fantail Stret |
| ✓ | Wellington |
| | |
| ✓ | 15 January |
| ✓ | Dear Papa |
| | |
| | Thank you four your present. I really like my new |
| | book, "Down the Dragon". It is a |
| | great story abowt a dragon. |
| | Dad read the story to me last nite. I wanted to |
| | listen to it agen, but it was getting late so Dad siad |
| | to get some sleep. |
| | Tomorrow afternoon som people are visiting ower |
| | school to talk to tell us all about the kites thay |
| | have made. |
| | |
| | I well say goodbye now and thanks again. |
| | |
| | Come to sea me soon, |
| ✓ | Jenny |



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| Scoring: | Answers/Responses: | Y6 (06/02) |
|---|---|---|

Recognition (11 marks)
Student recognises **correct lines** and **spelling errors**.

- 1 mark is given to each error-free line identified as correct.
- 1/mark is given to each error correctly identified.

**Production (10 marks)**
1 marks is given for each error that has been corrected accurately.

| | | | |
|---|---|---|---|
| Given | Street | 121 Fantail Stret | |
| Given | ✔ | Wellington | |
| Given | ✔ | 15 January | |
| Given | ✔ | Dear Papa | |
| 1 mark (for correct recognition) | for | Thank you four your present. I really like my | moderate |
| 1 mark (for corrected error) | | | moderate |
| 1 mark (for correct recognition) | ✔ | new book, "Down the Dragon". It is a | very easy |
| 1 mark (for correct recognition) | about | great story abowt a dragon. | easy |
| 1 mark (for corrected error) | | | easy |
| 1 mark (for correct recognition) | night | Dad read the story to me last nite. I wanted to | very easy |
| 1 mark (for corrected error) | | | easy |
| 1 mark (for correct recognition) | again | listen to it agen, but it was getting late | easy |
| 1 mark (for corrected error) | | | moderate |
| 1 mark (for correct recognition) | said | so Dad siad to get some sleep. | moderate |
| 1 mark (for corrected error) | | | moderate |
| 1 mark (for correct recognition) | some | Tomorrow afternoon som people are visiting | easy |
| 1 mark (for corrected error) | | | easy |
| 1 mark (for correct recognition) | our | ower school to talk to tell us all about the kites | moderate |
| 1 mark (for corrected error) | | | moderate |

| | | | |
|---|---|---|---|
| 1 mark<br>(for correct recognition)<br>1 mark<br>(for corrected error) | they | thay have made. | difficult<br><br>difficult |
| 1 mark<br>(for correct recognition)<br>1 mark<br>(for corrected error) | will | I well say goodbye now and thanks again. | difficult<br><br>difficult |
| 1 mark<br>(for correct recognition)<br>1 mark<br>(for corrected error) | see | Come to sea me soon, | easy<br><br>easy |
| Given | ✔ | Jenny | |
| **Total: 21 marks** | | | |

**Diagnostic Information**

**Common Errors**

In some cases the percentage of students able to recognise spelling errors differed from the percentage of students able to produce the correct spelling of words.

For example:

- 73% of students recognised "abowt" as an error, but only 68% of students could produced "about".
- 81% of students recognised "nite" as an error, but only 74% produced "night".
- 72% of students recognised "agen" as an error, but only 59% produced "again".
- 53% of students recognised "ower" as an error, but only 41% produced "our".

The words used in this resource are taken from *Spell-Write* Essential Words for Spelling and Writing.

| List 2 | List 3 | List 4 |
|---|---|---|
| for | about | night |
| they | said | again |
| some | will | |
| our | see | |

*Source: 'Spell-Write'. Written by Cedric Croft, NZCER, 1998.*

| *Strand* | *Function* | *Level* | *Resource type* | *Process* | WL3111 |
|---|---|---|---|---|---|
| Writ | CloseR | 2 | SWR | Think/Explore | |

***Keywords***

Proof reading; spelling; essential word lists.

***Description***

Students identify common spelling errors, taken from the essential word lists, and write the identified errors correctly. Students also identify lines of text without errors.

## WL3109

There are some spelling mistakes in the story below. Read the story all the way through and draw a circle around all the mistakes you can find.

Write the correct spelling of the mistakes in the space at the start of each line. If you cannot find a mistake, put a tick (4) in the space. The first two lines have been done for you.

| | |
|---|---|
| his | When Jack opened (hes) lunch box |
| ✓ | at playtime, he was really worried. |
| | Inside wer a packet of peanuts and |
| | to carrots, but no sandwiches, no crackers, |
| | and no apple. |
| | Mum had forgotten too pack his lunch! |
| | Jack was hungry, but he didn't no |
| | whot to do. If he ate everything now, |
| | he'd hav nothing left for lunchtime. |
| | He took out a carrot and crunched in to it. |

*Source: 'No Lunch', Illustrations by Nic Marshall, Written by Diana Noonan. Junior Journal, No. 22, Learning Media*



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| Scoring: | Answers/Responses: | Y4 (06/02) |
|---|---|---|

**Recognition (8 marks)**
Student recognises **correct lines** and **spelling errors**.
- 1 mark is given to each error-free line identified as correct.
- 1 mark is given to each error correctly identified.

**Production (7 marks)**
1 mark is given for each error that has been corrected accurately.

| | | | |
|---|---|---|---|
| Given | his | When Jack opened (hes) lunch box | |
| Given | ✔ | at playtime, he was really worried. | |
| 1 mark (for correct recognition)<br>1 mark (for corrected error) | were | Inside (wer) a packet of peanuts and | very easy<br>easy |
| 1 mark (for correct recognition)<br>1 mark (for corrected error) | two | (to) carrots but no sandwiches, no crackers, | difficult<br>difficult |
| 1 mark (for correct recognition) | ✔ | and no apple. | very easy |
| 1 mark (for correct recognition)<br>1 mark (for corrected error) | to | Mum had forgotten (too) pack his lunch! | difficult<br>difficult |
| 1 mark (for correct recognition)<br>1 mark (for corrected error) | know | Jack was hungry, but he didn't (no) | moderate<br>difficult |
| 1 mark (for correct recognition)<br>1 mark (for corrected error) | what | (whot) to do. If he ate everything now, | very easy<br>very easy |
| 1 mark (for correct recognition)<br>1 mark (for corrected error) | have into | he'd (hay) nothing left for lunchtime. | very easy<br>very easy |
| 1 mark (for correct recognition)<br>1 mark (for corrected error) | | He took out a carrot and crunched (in) to it. | very difficult<br>very difficult |
| **Total: 21 marks** | | | |

**Diagnostic Information**

| | |
|---|---|
| **two/to/too** | Students found it difficult to recognise the incorrect spelling of the word in the text. 32% of students recognised "to" as incorrect and 31% of students produced "two" as the correct spelling. 33% of students recognised "too" as the incorrect word and 31% of students produced "to" as the correct spelling. |
| **know** | 43% of students recognised "no" as the incorrect word, but only 37% of students were able to produce "know" as the correct spelling. |
| **into** | Only 12% of students recognised "in to" as a convention error and all 12% produced the correct word convention. |

The words used in this resource are taken from *Spell-Write* Essential Words for Spelling and Writing.

| List 1 | List 3 | List 4 | List 5 |
|---|---|---|---|
| to | were | two | know |
| have | what | into | |

*Source: 'Spell-Write', Written by Cedric Croft, NZCER, 1998.*

| *Strand* | *Function* | *Level* | *Resource type* | *Process* | **WL3109** |
|---|---|---|---|---|---|
| Writ | CloseR | 2 | SWR | Think/Explore | |

***Keywords***

Proof reading; spelling; essential word lists; junior journal.

***Description***

Students identify common spelling errors, taken from the essential word lists, and write the identified errors correctly. Students also identify lines of text without errors.

## *How Often Should a Standardised Test be Administered?*

If broad spelling skills are to be assessed systematically as part of a school-wide evaluation programme, one spelling test a year will be sufficient. There may be special circumstances where more than one test is deemed necessary, such as when an attempt is being made to measure the effectiveness of special programmes, or to document the progress of selected pupils. These situations will be few, however, as annual testing on a school-wide basis will ensure adequate monitoring, for most pupils, of the aspects of spelling measured by standardised tests.

## Mastery of Individual Words Identified for Study

If words from such sources as children's Personal Spelling Lists, or aspects of the classroom programme, such as social studies, science, or language units, are identified for specific study, there will be a need to assess how well they have been mastered. The purposes for which the study is undertaken in the first place will determine *how* any assessments are undertaken.

### *The Objective Dictates the Technique*

If the prime purpose is to aid *recall*, a traditional word-sentence-word spelling test will be adequate. If the major purpose for studying the chosen words is to teach children to *recognise* the correct form of the word, or *discriminate* correct from incorrect forms, some type of multiple-choice exercise would be suitable. If the major purpose is to help children to begin to learn some of the *patterns* and *structures* of the more common word "families", assessment tasks that include building various word-forms, by the addition of prefixes and suffixes, could be undertaken. If *meaning and use* of words are the major goals, assessment procedures reflecting these objectives are needed. Such procedures as using words in sentences that illustrate the meaning of the word, writing the meaning of the word, matching words with meanings, or supplying antonyms and synonyms, are appropriate. When semantic considerations are uppermost, the well known cloze technique is a possibility too, but the major difficulty would be in constructing an appropriate paragraph to include, in a natural and meaningful way, a group of words that had been selected for study.

The study of specific sets of words, within a classroom language programme, is likely to be undertaken with a variety of outcomes in mind, but the predominant one is likely to be that children expand their vocabulary and improve their accuracy of word use and spelling, with a view to maintaining growth in written language. If a variety of outcomes are being sought, a variety of testing techniques will be needed.

### *Validity, Reliability, and Mastery*

When informal classroom tests constitute the major assessment method, important questions arise about the validity of the method, reliability of the measurement, and

criteria for deciding when mastery has been achieved. If the mode of testing matches the desired outcome (for example, the intention was to teach "the s-p-e-l-l-i-n-g", so a word-sentence-word test was used), the test will be valid. If the test does not measure the objective (for example, the intention was to teach meaning and use, but a word-sentence-word test was used), the test will be invalid.

To assess a test's reliability is time-consuming, so it would be unrealistic to suggest that formal assessment of this aspect of every classroom test could be undertaken. It is preferable to accept that scores on informal classroom tests are subject to measurement error, and that results should be taken as broadly indicative of the underlying learning at the time of testing. The results are not constant, exact, or subject to variation.

The confidence that can be placed in the consistency of the tests has some bearing on the criteria for deciding when mastery has been achieved. Rigid criteria cannot be drawn for tests that are subject to wide variation in scores. In addition, there may be a strong judgmental aspect as well, as it is likely that criteria for mastery will vary from child to child, and from task to task. Two important questions to keep in mind are, "How consistent are the scores from this test likely to be?" and, "What criteria do I accept as evidence that this group of words has been mastered to an acceptable level?"

## Diagnostic Assessment of Spelling

There are two approaches to gaining diagnostic information about a child's spelling competencies. First, careful analytic marking may be made of samples of the child's writing; secondly, a test giving diagnostic information may be administered.

There are obvious benefits in basing remedial instruction and diagnostic assessment on each child's writing, as the misspelt words are readily identified, and remedial teaching can follow quickly. However, the major disadvantage of this approach is that it uncovers language and spelling weaknesses restricted to the words and classes of word that the child uses. If a child has a limited vocabulary, there may be many weaknesses that do not appear in the writing.

The weakness of basing diagnostic assessment solely on writing is avoided by a

well-constructed test, designed to reveal diagnostic information. The standardised nature of the test content ensures that all pupils tackle the same selection of spelling tasks, but its major inherent weakness is that the language measured may be irrelevant to a particular child's writing needs. As noted earlier, it is probably wisest to make the initial diagnosis through samples of writing, and then either verify or extend this information, with the sparing use of standardised or diagnostic tests.

Detailed discussion of how to assess a child's writing with a view to uncovering the major weaknesses is outside the scope of this manual. (Westwood, 1999, pp. 43–53, has a useful section on work samples.) The principles inherent in taking a running record of oral reading also apply to analysing a sample of writing. Errors of spelling and usage should be identified, and a systematic approach to the classification of these errors adopted. For example, the classification of Gates and Russell, as set out in *Learning to Spell* (Arvidson, 1960b), remains a useful starting point:

Additions: *sticke, carefuly*

Insertions: *neack, capiture*

Omissions: *fether, exept*

Substitutions: *becose, kolony*

Transpositions: *feild, fishined*

Phonetic errors: *wate, vakashun*

As Arvidson (1960b) explained:

> An examination of the errors of any particular type may suggest the reasons for failure. For example, the addition in the word *sticke* may indicate a tendency to add a final *e* to all words, it may be a question of false analogy with familiar words (*like*), or it may result from poor powers of auditory analysis.

By looking at the words misspelt, some information regarding the spelling of similar words may also be obtained. For example, if "tower" is written as "towr", this may suggest that other words that are similar in spelling to "tower" may also

be misspelt. Other examples of this nature can be found in the Teachers Manual, pp. 13–24, of the *Proof-Reading Tests of Spelling*.

To sum up, successful diagnosis of spelling and usage difficulties calls for the ability to find a clue and follow it up methodically. Although the emphasis should be on careful analytical marking of writing, any restrictions in the language being used may mask other equally serious weaknesses. To some extent, a spelling test may get over the masking effect of highly selective writing, but the child's writing should be regarded as the prime source of diagnostic information about spelling, simply because the writing reflects the words that the child actually writes, and these words must be mastered first.

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